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AUTHOR Miller, Fred
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ABSTRACT

A unit on online data retrieval techniques designed for a college course in international marketing is described. The unit is intended to teach students how to compile information on overseas markets and competitors. Online retrieval is seen as a relatively inexpensive means of gathering important data from otherwise inaccessible international sources. The required hardware include a computer or computer terminal, a hard or floppy disk storage device, and a modem. Also necessary is communications software that can handle log-on procedures for each information service used, maintain user confidentiality, and allow capture and storage of all displayed text. In a class assignment, students conduct a study of real market opportunities for real regional or relevant hypothetical firms. The assignment consists of a cultural analysis, economic analysis, and product/market evaluation, with each component requiring extensive secondary research. The objectives are to increase student awareness of the range of information available electronically and to improve students' ability to gather and apply the information to marketing decisions. The variety of available information services is discussed, and the logistic problems associated with online retrieval are examined. (MSE)

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# Gathering International Competitive Intelligence via Online Data Retrieval in the International Marketing Class

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Fred Miller
Department of Management and Marketing
Murray State University
Murray, KY 42071

(502) 762-6206 Office
(502) 554-4945 Home

Fred Miller is Assistant Professor of Marketing at Murray State University. His teaching and research interests are in the area of marketing management, international marketing, international business education and microcomputer applications in business education. He has lived and taught in several countries. His work has appeared in International Marketing Review, the Journal of Marketing Education, the Journal of Education for Business, and Collegiate Microcomputing.

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# Gathering International Competitive Intelligence via Online Data Retrieval in the International Marketing Class


## ABSTRACT

The challenge facing US business schools is to produce executives capable of strategic planning in global market environments. As competitive intelligence is the raw material of strategic planning, these executives must be well versed in techniques for acquiring and analyzing such information. This paper describes an assignment to improve students' abilities to use electronic online data retrieval techniques to compile information on overseas markets and competitors. This assignment is designed for use in student projects in an International Marketing course.


## INTRODUCTION

Online data retrieval techniques have not yet realized their full potential within the business curriculum. They have a strong contribution to make in the International Marketing class in that they provide timely, comprehensive access to information on world markets. This paper; 1) discusses the value of these techniques, 2) describes an assignment for this class which uses them, and 3) addresses the logistical problems encountered in this assignment.

## I. ONLINE COMPETITIVE INTELLIGENCE IN GLOBAL STRATEGIC PLANNING

The challenge facing US businesses in the global marketplace is obvious. We must regain/retain our competitiveness in our own markets and those of our trading partners. Many of the responses to this challenge are also obvious. Increased quality through automation, employee relations improvements and quality assurance techniques have important roles to play. So does increased cultural and linguistic knowledge of the countries with which we trade. It is also important that we improve our abilities to gather competitive intelligence about foreign markets for use in strategic decision making.

Competitive intelligence is information on markets and their characteristics as well as competitors, their capabilities, philosophies, strategies and competitive practices. Gathering and assessing competitive intelligence is a vital part of any

business decision that is sensitive to environmental or competitive forces. (Miller 1987) It is a particularly vital in international strategic decisions due to increases in cost and risk. This is especially true in countries where a firm lacks direct experience.

Electronic online data retrieval is a valuable tool for gathering competitive intelligence. Through information services such as DIALOG, users have access to a large number of distinct databases compiled and maintained by various information suppliers. The databases are updated frequently to provide timely information. They index a wide variety of sources to provide breadth of coverage. Many of them can search several years worth of data to provide depth of coverage. Several business databases cover worldwide trade literature that is difficult to find in the US. Moreover, many of these publications are not indexed at all in print form. (Daniels 1984; O'Leary 1986; Spickard 1987)

Despite this potential, these tools have not been widely integrated into the business curriculum. Teaching of microcomputer applications has concentrated on data analysis tools at the expense of data collection tools. (Miller 1985; Doney and Ross 1987; Kurtz and Boone 1987) As globally conscious strategic planning increases in importance, it is imperative that we integrate these tools into our classrooms.

This need is particularly acute in the International Marketing class. If students are to evaluate foreign markets effectively, it is imperative that they have access to as wide a range of information as possible. They should also be trained to use the tools which can gather information of this scope. Further, they should not be limited to the printed resources normally available in US universities, but should become familiar with trade literature from around the world.

Online retrieval of competitive intelligence can help meet all these conditions. It allows students access to information not otherwise available, at relatively little expense of time or money. Moreover, it can improve the quality of information brought to bear on student reports dramatically. The purpose of this paper is to discuss the integration of online data retrieval assignments into the International Marketing

class.

## II. HARDWARE AND SOFTWARE REQUIREMENTS

The hardware requirements for online data retrieval assignments are simple. One needs a computer or computer terminal, a disk storage device (hard or floppy), and a modem. Virtually all major types of microcomputers offer these capabilities at reasonable cost. An IBM compatible system, with floppy disk storage, dot matrix printer and 2400 baud modem can be purchased for less than $1,000. However, most existing microcomputer systems lack only the modem to meet this basic configuration requirement. Modems which operate at 2400 baud cost from $169 to $500. (The baud rate measures the speed of telecommunications transfer, with the higher baud number meaning a faster transfer rate. While not the fastest available, the 2400 baud rate is widely supported and offers the best current speed/price combination.)

To operate this telecommunications system, one also needs communications software to control the modem and manage the process of online information transfer. This software is available from several sources at a range of costs. Stand alone communications packages such as CROSSTALK, or SMARTCOM range from $100 to $160. Shareware packages such as PROCOMM are obtainable from local electronic bulletin boards. They allow the user to sample the software and, on approval, remit a requested price (around $50) to the authors. Communications capabilities are built into some integrated software packages such as ENABLE and FRAMEWORK. Finally, several providers of online information services offer their own communications software. For example, the service described in this paper, DIALOG, offers DIALOGLINK for $125-150.

For this assignment, communications software must meet two performance criteria. First, it must be able to handle logon procedures for each of the information services used while maintaining confidentiality of the user's account number and password. Second, it must allow capture and storage of all text displayed on the screen to allow data to be extracted and saved simultaneously. All of the packages mentioned above

perform these necessary tasks. However, this list is not exhaustive, and users may have telecommunications requirements beyond the bounds of this assignment (uploading and downloading program and data files, for example). Faculty should consider these factors in selecting communications software.

The final component in this system is a subscription to an online information service. Several services are available which contain information of value to international marketers. Among them are the SOURCE, GENIE and COMPUSERVE, which are aimed at consumers but offer some business information as well. Services aimed primarily at the business user include Control Data, Interactive Market Systems, Mead, Data-Star and Pergamon Infoline. The service chosen for this assignment is DIALOG information services, and specifically the DIALOG Classroom Instruction Program. (Miller 1987, 63-69)

There are three reasons for this choice. First, the DIALOG system contains over 200 individual data bases, covering a variety of subject areas and virtually the entire world among them. Thus it allows the user to select from several sources in the search for relevant information. Second, this breadth offers students significant transferability of the skills learned in this assignment to other courses and projects. Third, through the Classroom Instruction Program, DIALOG offers access to most of its databases at a very reasonable price, $15.00 per connect hour. This rate compares with normal hourly rates of $40 to $150 and additional charges for each record extracted. This redueced rate applies only to instructional applications and is designed to familiarize students with the relevance of DIALOG's resources for their business decisions.

## III. STRUCTURE OF THE ASSIGNMENT

The online data retrieval assignments described here are part of a larger group research project in the International Marketing class. In the project, groups of four to six students are charged with assessing the market for a given product in a specific

foreign market. Whenever possible, the products and countries selected are relevant to an existing regional business. That is, when possible, students are evaluating real foreign market opportunities for real firms. This enhances the value of the project, reenforces the applicability of the exercise and creates interaction between students and potential employers.

The larger assignment is divided into three distinct parts; a cultural analysis, an economic analysis, and a product/market evaluation. The due dates are spread through the semester to distribute students' research time and to provide timely evaluation and feedback. Each section requires extensive secondary research in various government and reference sources. Taken together, the segments produce a broad based assessment of a market opportunity within the country selected.

Each section of the report includes an online data retrieval assignment. Figure 1 contains selected topics from each section and the databases used for gathering relevant information. Figure 2 contains summary descriptions of the databases identified in Figure 1.

The educational objectives of the online data retrieval exercises are; 1) to increase students' awareness of the range of information available to them electronically, and 2) to improve their ability to gather and apply this information to marketing decisions. The project pursues the first objective through an introductory lecture session on DIALOG and the sources of information it contains. It also exposes students to several types of information from many different databases through the course of the semester.

The second objective, improved skill at information gathering and application is more difficult. Here, students must learn to select appropriate databases, devise fruitful search strategies, and extract meaningful information from the data they generate. The project pursues this objective by gradually increasing student responsibility for online data retrieval throughout the term. In initial assignments, the instructor performs most of these tasks in sessions with each of the student groups. In subsequent exercises, students are progressively more responsible for

FIGURE 1: SELECTED PROJECT TOPICS AND CORRESPONDING DATABASES

| PROJECT COMPONENT AND TOPICS | SAMPLE DATABASES SEARCHED |
|---|---|
| I. Cultural Component | |
| A. Geographic setting<br>B. Summary of relevant history<br>C. Significant current issues<br>D. Social institutions<br>E. Religious system and values<br>F. Living conditions and lifestyles<br>G. Social behavioral customs visitors should observe | 1. PTS F&S Index<br>2. National Newspaper Index |
| II. Economic Component | |
| A. Population characteristics<br>B. Economic statistics<br>1. GDP overall and per capita<br>2. personal income<br>3. distribution of wealth<br>4. foreign trade statistics<br>C. Level of technology<br>D. Marketing infrastructure<br>1. distribution/transportation system<br>2. mass communication system; media availability<br>3. consumer marketing practices<br>E. Patterns of consumer/industrial buying | 1. PTS International Forecasts<br>2. PTS PROMT<br>3. BIS Infomat World Business<br>4. ABI Inform |
| III. Product/Market Evaluation | |
| A. Product/market description<br>1. sales levels and trends<br>2. competing products and market shares<br>3. performance of imports<br>4. strategies of competitors<br>B. Market entry strategy<br>1. target market<br>2. marketing mix<br>C. Pro forma statements<br>D. List of potential customers/agents/JV partners | 1. PTS MARS<br>2. PTS PROMT<br>3. PTS International Forecasts<br>4. D&B International Dun's Market Identifiers<br>5. Foreign Trade and Economic Abstracts |

FIGURE 2: DESCRIPTIONS OF DATABASES CITED IN FIGURE 1

ABI INFORM

Extensive summaries of articles from top business and management journals - business practices, corporate strategies and trends

BIS INFOMAT WORLD BUSINESS

Concise abstracts of international business news articles taken from over 500 business newspapers and journals, translated into English from 10 languages

D&B INTERNATIONAL MARKET IDENTIFIERS

Directory listings, sales volume, corporate data, and references to companies for non-U.S. private and public companies from 133 countries - international trade and industry prospects

FOREIGN TRADE AND ECONOMIC ABSTRACTS

Summaries of literature in all areas of international economic sciences - determining industries, distribution channels

NATIONAL NEWSPAPER INDEX

Front page to back page indexing of articles from the Christian Science Monitor, the Los Angeles Times, The New York Times, The Wall Street Journal, and The Washington Post - general reference questions and current events

PTS F&S INDEXES

Brief descriptive annotations of articles and publications, covering U.S. and international company, product and industry information - company and industry tracking

PTS INTERNATIONAL FORECASTS

Summaries of published forecasts with historical data for the world, excluding U.S., covering general economics, all industries, products, end-use data - strategic planning for international development

PTS MARS

Textual and statistical information on the marketing and advertising of consumer goods and services - market and advertising research, competitive intelligence

PTS PROMT

Primary source of information on product introductions, market share, corporate directions and ventures, and companies in every industry, containing detailed summaries of articles from trade and industry sources - market and strategic planning, tracking new technologies and products

Source: "DIALOG Database Descriptions", DIALOG Information Services, 1986.

performing the selection, search and application tasks. They may consult supporting reference materials and the instructor as needed for help with these responsibilities. While these exercises do not produce complete mastery of online data retrieval skills, they do provide students a strong foundation of knowledge and operational skill upon which to build.

## IV. LOGISTICS

There are several logistic problems associated with this type of exercise, as well as a variety of options to overcome them. First, these assignments are voracious in their consumption of faculty time. Instructors must work with each group to help them focus their research on the specific product/market they are evaluating. Especially in the early sessions, when students lack both knowledge and confidence, the time expended on advising, coaxing and demonstrating is extensive. To ease this burden, faculty may use; 1) graduate assistants trained in search techniques, 2) students from previous classes who have performed the exercise, and/or 3) library personnel well versed in search procedures. Instructors may also videotape orientation and instruction sessions, especially for the first exercises, which are simpler and more standardized than later ones.

A second logistic problem is achieving the proper balance between access to searching systems and control over their use. Students should be encouraged to conduct searches as often as they wish. However, they should not be given direct, independent access to the institution's account number and password. Uncontrolled access to online sources can produce substantial telecommunications charges for which no group is willing to pay. This problem can be avoided by; 1) controlling access to the communications software diskette, upon which the account number and password are stored, 2) changing the password(s) for each account on a frequent, regular basis, and 3) requiring faculty/staff presence and oversight for each search conducted by students. While these solutions consume additional faculty/staff time, they do avoid

uncontrolled telecommunications costs.

A third logistic problem is disk and file management. Each search for each group produces at least one disk file. With eight groups the total will reach 32 to 40 files per section. Moreover, students must print all files to be able to assimilate them into their analysis and append them to their reports. Unless properly managed, these requirements create a cascade of floppies and paper sufficient to daunt the most intrepid instructor. One way to overcome these problems is to create one data disk for each group that remains in the possession of the instructor when not in use by students. Each data diskette should be a formatted, bootable system disk. It should also contain "Print" and "Diskcopy" utilities and an "autoexec.bat" file which illustrates the proper format for using them. Figure 3 contains a copy of the initial screen of a diskette configured in this way. When a search file is saved to this diskette, students have access to all the commands needed to boot the system, print the file, display it on the monitor and/or produce their own copy of the diskette. Upon completion of these tasks, they return the diskette to the instructor, who may delete files that have been printed to make room for subsequent search files.

The final logistic problem is accounting. Who should pay for the searches, How much should they pay and who should manage the records? Ideally universities should bear these expenses as a necessary cost of teaching research techniques in the information age. However, the current economics of higher education render this solution unlikely. At most institutions, students will pay for the searches. They could do so on a user fee basis, paying the exact costs of the searches performed. However, since billing follows the search by several days, problems of collecting and bookkeeping arise. A better approach is to collect a standard course fee from students at the beginning of each semester, preferably as part of the normal fee payment procedure. If this approach is taken, instructors should; 1) set the fee high enough that all telecommunications, diskette and paper costs are covered and 2) insure that any surplus funds are available to purchase reference materials for the databases used. This will enhance the learning potential of the exercises. For the assignments in this

FIGURE 3: INITIAL SCREEN OF STUDENT DATA DISKETTE

```
A>dir

 Volume in drive A has no label
 Directory of  A:\

COMMAND  COM     23791  12-30-85   12:00p
PRINT    COM      8976  12-30-85   12:00p
DISKCOPY COM      6224  12-30-85   12:00p
AUTOEXEC BAT       283   1-01-80   12:04a
FRACOSMT LOG     50059   2-07-88   12:15a
FRANCNEW LOG     24951   2-12-88   12:39a
        6 File(s)    199680 bytes free

A>echo off
--
To print a file, type;  PRINT filename.ext   Ex. PRINT COMMAND.COM
--
To see a file on the screen, type;  TYPE filename.ext  Ex. TYPE COMMAND.COM
--
To copy this disk, place a balnk disk in drive B and type;
DISKCOPY A: B:

A>
```

class, a fee of $5 per student has been sufficient to achieve these objectives.

Though these problems can be substantial, proper approaches will minimize their effects. In any event, they are more than offset by the additional skills and knowledge they provide to students.

In summary, electronic gathering of competitive intelligence is an important part of international marketing strategy planning. It should be incorporated into international marketing courses. The DIALOG Classroom Information Program offers a comprehensive, low cost opportunity to add search assignments to this course. The hardware and software requirements are modest. Though there are logistic problems they are manageable and offset by substantial benefits to students. We should continue to pursue this opportunity.

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